Clean Version of the New Claims

17. A method of reducing training time for use by a first modem to connect to a second modem, said first modem supporting a V.8bis protocol having a capabilities request signal followed by a capabilities exchange, said method comprising the steps of:

placing a call to said second modem;

receiving said capabilities request signal from said second modem in response to said call;

detecting said capabilities request signal; and

transmitting a fast connect signal during said step of receiving said capabilities request signal, in response to said detecting step, to cause said capabilities exchange between said first modem and said second modem to be skipped.

18. The method of claim 17 further comprising the step of receiving a fast connect acknowledgment signal from said second modem in response to said fast connect signal.

19. The method of claim 17, wherein said capabilities request signal is a CRe signal.

20. The method of claim 17, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said second modem.

21. The method of claim 20 further comprising the step of receiving a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

22. The method of claim 21, wherein said transition sequence is a QTS signal.

23. A method of reducing training time for use by a first modem to connect to a second modem, said first modem supporting a capabilities exchange protocol including a beginning portion and a capabilities exchange portion, said method comprising the steps of:

placing a call to said second modem;

receiving said beginning portion of said capabilities exchange protocol being generated by said second modem in response to said call;

detecting said beginning portion of said capabilities exchange protocol; and

transmitting a fast connect signal during said step of receiving said beginning portion of said capabilities exchange protocol, in response to said detecting step, to cause said capabilities exchange portion between said first modem and said second modem to be skipped.

24. The method of claim 23, wherein said capabilities exchange protocol is a V.8bis protocol.

25. The method of claim 24, wherein said beginning portion of said capabilities exchange protocol is a CRe signal.

26. The method of claim 23, wherein said capabilities exchange protocol is a V.8 protocol.

27. The method of claim 26, wherein said beginning portion of said capabilities exchange protocol is an amplitude modulated answer tone.

28. The method of claim 27, wherein said amplitude modulated answer tone is around 2100 Hz.

29. The method of claim 23, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said second modem.

30. The method of claim 29 further comprising the step of receiving a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

31. The method of claim 30, wherein said transition sequence is a QTS signal.

32. The method of claim 23 further comprising the step of receiving a fast connect acknowledgment signal from said second modem in response to said fast connect signal.

33. A first modem configured to connect to a second modem, said first modem further configured to reduce training time and to support a V.8bis protocol having a capabilities request signal followed by a capabilities exchange, said first modem comprising:

a call establishment element configured to place a call to said second modem;

a receiver configured to receive said capabilities request signal from said second modem in response to said call;

a detector configured to detect said capabilities request signal; and

a transmitter configured to transmit a fast connect signal while said receiver is receiving said capabilities request signal, in response to said detector detecting said capabilities request signal, to cause said capabilities exchange between said first modem and said second modem to be skipped.

34. The first modem of claim 33, wherein said receiver is further configured to receive a fast connect acknowledgment signal from said second modem in response to said fast connect signal.

35. The first modem of claim 33, wherein said capabilities request signal is a CRe signal.

36. The first modem of claim 33, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said second modem.

37. The first modem of claim 36, wherein said receiver is further configured to receive a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

38. The first modem of claim 37, wherein said transition sequence is a QTS signal.

39. A first modem configured to connect to a second modem, said first modem further configured to reduce training time and to support a capabilities exchange protocol including a beginning portion and a capabilities exchange portion, said first modem comprising:

a call establishment element configured to place a call to said second modem;

a receiver configured to receive said beginning portion of said capabilities exchange protocol being generated by said second modem in response to said call;

a detector configured to detect said beginning portion of said capabilities exchange protocol; and

a transmitter configured to transmit a fast connect signal while said receiver is receiving said beginning portion of said capabilities exchange protocol, in response to said detector detecting said beginning portion of said capabilities exchange protocol, to cause said capabilities exchange portion between said first modem and said second modem to be skipped.

40. The first modem of claim 39, wherein said capabilities exchange protocol is a V.8bis protocol.

41. The first modem of claim 40, wherein said beginning portion of said capabilities exchange protocol is a CRe signal.

42. The first modem of claim 39, wherein said capabilities exchange protocol is a V.8 protocol.

43. The first modem of claim 42, wherein said beginning portion of said capabilities exchange protocol is an amplitude modulated answer tone.

44. The first modem of claim 43, wherein said amplitude modulated answer tone is around 2100 Hz.

45. The first modem of claim 39, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said second modem.

46. The first modem of claim 45, wherein said receiver is further configured to receive a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

47. The first modem of claim 46, wherein said transition sequence is a QTS signal.

48. The first modem of claim 39, wherein said receiver is further configured to receive a fast connect acknowledgment signal from said second modem in response to said fast connect signal.

49. A method of reducing training time for use by a first modem to connect to a second modem, said first modem supporting a capabilities exchange protocol including a beginning portion and a capabilities exchange portion, said method comprising the steps of:

receiving a call from said second modem;

transmitting said beginning portion of said capabilities exchange protocol to said second modem in response to said call;

receiving a fast connect signal during said step of transmitting said beginning portion of said capabilities exchange protocol, in response to said transmitting step;

skipping a transmission of said capabilities exchange portion to said second modem, in response to said step of receiving said fast connect signal.

50. The method of claim 49, wherein said capabilities exchange protocol is a V.8bis protocol.

51. The method of claim 50, wherein said beginning portion of said capabilities exchange protocol is a CRe signal.

52. The method of claim 49, wherein said capabilities exchange protocol is a V.8 protocol.

53. The method of claim 52, wherein said beginning portion of said capabilities exchange protocol is an amplitude modulated answer tone.

54. The method of claim 53, wherein said amplitude modulated answer tone is around 2100 Hz.

55. The method of claim 49, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said first modem.

56. The method of claim 55 further comprising the step of transmitting a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

57. The method of claim 56, wherein said transition sequence is a QTS signal.

58. The method of claim 49 further comprising the step of transmitting a fast connect acknowledgment signal to said second modem in response to said fast connect signal.

59. A first modem configured to connect to a second modem, said first modem further configured to reduce training time and to support a capabilities exchange protocol including a beginning portion and a capabilities exchange portion, said first modem comprising:

a call receiving element configured to receive a call from said second modem;

a transmitter configured to transmit said beginning portion of said capabilities exchange protocol in response to said call;

a receiver configured to receive a fast connect signal while said transmitter is transmitting said beginning portion of said capabilities exchange protocol, in response to said transmitter transmitting said beginning portion of said capabilities exchange protocol;

wherein said first modem skips a transmission of said capabilities exchange portion to said second modem, in response to said receiving said fast connect signal.

60. The first modem of claim 59, wherein said capabilities exchange protocol is a V.8bis protocol.

61. The first modem of claim 60, wherein said beginning portion of said capabilities exchange protocol is a CRe signal.

62. The first modem of claim 59, wherein said capabilities exchange protocol is a V.8 protocol.

63. The first modem of claim 62, wherein said beginning portion of said capabilities exchange protocol is an amplitude modulated answer tone.

64. The first modem of claim 63, wherein said amplitude modulated answer tone is around 2100 Hz.

65. The first modem of claim 59, wherein said fast connect signal conveys a signal point identifier that identifies one or more signal points for use by said first modem.

66. The first modem of claim 65, wherein said transmitter is further configured to transmit a transition sequence, based on said one or more signal points, capable of highlighting one or more digital impairments.

67. The first modem of claim 66, wherein said transition sequence is a QTS signal.

68. The first modem of claim 59, wherein said transmitter is further configured to transmit a fast connect acknowledgment signal to said second modem in response to said fast connect signal.